ISMP Medication Safety Self Assessment® for Perioperative Settings: How to Obtain the Most Valuable, Accurate, and Useful Results

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Disclosure

Rebecca Lamis, Judy Smetzer, and Susan Paparella declare no conflicts of interest, real or apparent, and no financial interest in any product or service mentioned in this program.

Learning Objectives

Following completion of this activity, participants will be able to:

1. State how participation in the ISMP Medication Safety Self Assessment® for Perioperative Settings will benefit healthcare organizations.

2. Describe how to complete the assessment, submit the results to ISMP anonymously, and use available reports to identify, prioritize, and guide improvements.

3. Outline the steps recommended for full engagement in the assessment process to ensure the most useful results.
Why Focus on Perioperative Services?

– High-risk setting; fast-paced, involving multiple individuals and handoffs

– Medication-related events occur in all phases of the perioperative process
  
  • 1 observed medication error in half of all surgical procedures\(^5\)
  
  • 1 self-reported event in every 1,285 procedures\(^6\)
  
  • 1 event in every 20 medication administrations; more than 1/3\(^{rd}\) led to patient harm\(^5\)
  
  • Occurs in at least 1 of every 133 doses administered during anesthesia\(^7,8\)

– Continued public health issue\(^2,4\)

– Hear from providers that the safety rules are different than in the rest of the organization; this area is under-represented in event reporting
Benefits to Organizations

- Provide a standardized way for organizations to assess the safety of systems and practices associated with medication use in any phase of perioperative care
- Heighten awareness of best practices
- Compare their results with demographically similar organizations
- Create organization-specific, safety focused initiatives

National Benefits

- Create a baseline of national efforts
- Pinpoint how currently designed systems, staff practices, and emerging challenges may impact perioperative medication safety
- Determine challenges many healthcare providers face in keeping patients safe during all perioperative phases of care
- Develop tools/resources associated with preventing harm from medication use
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Advisory Group

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Endorsing Organizations

- American Association for Accreditation of Ambulatory Surgery Facilities (AAAASF)
- American Association of Nurse Anesthetists (AANA)
- American College of Clinical Pharmacy (ACCP) Perioperative Care Practice and Research Network (PRN)
- American Society for Health Care Risk Management (ASHRM)
- American Society of Health-System Pharmacists (ASHP)
- American Society of PeriAnesthesia Nurses (ASPAR)
- Anesthesia Patient Safety Foundation (APSF)
- Association of periOperative Registered Nurses (AORN)
- Children’s Hospitals’ Solutions for Patient Safety (SPS)
- ECRI
- Infusion Nurses Society (INS)
- Institute for Healthcare Improvement (IHI)
- National Association for Healthcare Quality (NAHQ)
- Pediatric Pharmacy Association (PPA)
- The Joint Commission (TJC)
Who should participate?

- US hospitals that perform inpatient and/or outpatient medical and/or surgical procedures
- Freestanding US ambulatory surgery centers, including those dedicated to gastrointestinal/endoscopy procedures
- Other US facilities that perform outpatient medical and/or surgical procedures

Scope

- Included
  - Perioperative and procedural processes, staff, equipment, technology, environment of care, and/or medications associated with medical and/or surgical procedures and the patients who undergo them
  - Medical and/or surgical procedure is defined as any procedure performed on a patient by a licensed healthcare practitioner that requires moderate sedation, deep sedation, monitored anesthesia care (MAC), regional anesthesia, and/or general anesthesia, including diagnostic and invasive procedures that meet this definition

- Excluded
  - Procedures that require minimal sedation
  - The care of patients after they are discharged from the facility or transferred out of the perioperative setting, usually to an inpatient hospital bed
Assessment Items

- Selected items based on the types of errors and safety risks identified in these settings
- Critical safe medication systems and practices
- Evidence-based items and expert opinion
- Extends beyond minimum standards of practice

ISMP’s Key Elements of the Medication Use System™

I. Patient Information
II. Drug Information
III. Communication of Drug Orders and Other Drug Information
IV. Drug Labeling, Packaging, and Nomenclature
V. Drug Standardization, Storage, and Distribution
VI. Medication Delivery Device Acquisition, Use, and Monitoring
VII. Environmental Factors, Workflow, and Staffing Patterns
VIII. Staff Competency and Education
IX. Patient Education
X. Quality Processes and Risk Management
Highlighted Terms Used

- Additional defined terms can be found in the Glossary (pages 73-78) and are designated throughout the text in **BOLD, SMALL CAPITAL LETTERS**

- In the online version of the assessment, glossary terms are linked to their definitions when they appear in demographic questions or self-assessment items

| Scoring Key |

### Self-Assessment Items

**Key Element I: Patient Information**

<table>
<thead>
<tr>
<th>Core Characteristic # 1</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential patient information is obtained, readily available in useful form, and considered when prescribing, dispensing, and administering perioperative medications, and when monitoring the effects of these medications.</td>
<td>1</td>
<td></td>
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<tr>
<td>A computer-generated identification bracelet is verified for correctness using two unique patient identifiers and placed on the patient prior to medication adminis-</td>
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Weighted Scores

- Based on impact to patient safety and ability to sustain improvement
- Lowest score: 0; Highest score: 16
- Some with no numerical score unless there is partial or full implementation; some receive no numerical score without full implementation throughout the facility
- N/A choices have been assigned weighted scores, based on the degree of risk avoided
- Scores not viewable during the assessment

Items Weighted Based on Impact

<table>
<thead>
<tr>
<th>Power (Leverage)</th>
<th>System Reliability</th>
<th>Human Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Max: 16</td>
<td></td>
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<tr>
<td>Medium</td>
<td>Max: 10</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Max: 6</td>
<td></td>
</tr>
</tbody>
</table>

Most Effective: Hardest to Implement

- Forcing functions
- Barriers and fail-safes
- Automation and computerization
- Standardization and protocols
- Redundancies

Least Effective: Easiest to Implement

- Rules and policies
- Educational programs
- Available information
- Suggestions to "be more careful"
Frequently Asked Questions

Demographic Questions

- Hospitals: 20 questions
- Freestanding ambulatory facilities: 19 questions

Types of questions include:
- bed size or patient visits
- urban/rural; location
- ownership; part of healthcare system
- patient population served; primary type of service
- training programs
- number of operating/procedure rooms
- number and types of procedures performed
- anesthesia and pharmacy services
- where anesthesia personnel obtain medications from
- available technology
Key Element I: Patient Information

1 Core Characteristic: 25 items (Core #1)

Topics addressed include:
- patient identification bracelet
- medication reconciliation
- patient allergies/drug intolerances (documented; screened)
- opioid status (naive vs. tolerant) (documented; used to plan therapy)
- patient weight (metric only; accurate/measured)
- patient selection criteria for PCA/PCEA
- monitoring (pulse oximetry, capnography, sedation, pain, vital signs)

Example item:
- Item #11: On the day of the procedure, patient weights measured only in metric units (i.e., grams or kilograms) are obtained for all patients undergoing a medical and/or surgical procedure.

Key Element II: Drug Information

1 Core Characteristic: 18 items (Core #2)

Topics addressed include:
- drug reference materials (free of error-prone abbrev.; updated)
- safe maximum dose limits/ranges (established; followed)
- pre-/postop orders entered into CPOE; verified by pharmacist
- protocol for malignant hyperthermia (current; accessible)
- screening and holding/discontinuing antithrombotic medications
- emergency drug dosing guidelines (easily accessible on cart)
- preference cards (approved; clear; standardized)

Example item:
- Item #38: A protocol for treating malignant hyperthermia, based on current reference material from the Malignant Hyperthermia Association of the United States (MHAUS), is readily accessible, along with the MHAUS hotline (phone number).
Key Element III: **Communication of Drug Orders & Info.**

- **1 Core Characteristic:** 21 items (Core #3)

- **Topics addressed include:**
  - communication of drug therapy administered intraoperatively
  - transfer of care communication; hand-off reports
  - verbal orders (when to accept; how to communicate/document)
  - standard protocols, guidelines, order sets (PCA/PCEA, IV and neuraxial opioids, neuraxial anesthesia, elastomeric pumps)
  - drug diversion (system to deter, detect, investigate)
  - dialogue about intimidation; process for conflict resolution

- **Example item:**
  - **Item #49:** Face-to-face verbal orders from prescribers who are onsite in the facility are never accepted, except in emergencies or during sterile procedures where ungloving would be impractical.

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Key Element IV: **Drug Labeling, Packaging, & Nomenclature**

- **2 Core Characteristics:** 22 items (Cores #4-5)

- **Topics addressed include:**
  - similar labels, packaging, drug names (differentiate/separate)
  - medication storage in trays, kits, carts, ADCs (label facing up)
  - storage of irrigation solutions, tranexamic acid, NMBs, lubricants
  - labeling used on medication storage bins, trays, kits, drawers
  - use of preprinted labels
  - labeling of containers on/off the sterile field

- **Example item:**
  - **Item #71:** Vials of tranexamic acid stocked in ADCs and anesthesia trays, kits, carts, drawers, or other anesthesia storage areas are sequestered or separated from look-alike vials used for regional anesthesia (e.g., bupivacaine, ropivacaine).
Key Element V: Drug Standardization, Storage, & Distribution

- 4 Core Characteristics: 47 items (Cores #6-9)

- Topics addressed include:
  - standard mixtures/concentrations
  - use of commercially manufactured/prepared, pharmacy-prepared
  - standard storage configurations; separate storage
  - availability of antidotes, reversal/rescue agents
  - access to certain medications/how medications are stocked
  - safe preparation and wasting procedures
  - hazardous drugs

- Example item:
  - Item #126: FentaNYL transdermal patches are not stocked in perioperative unit stock, including ADCs, and are not used to treat acute or postoperative pain.

Key Element VI: Device Acquisition, Use, & Monitoring

- 1 Core Characteristic: 16 items (Core #10)

- Topics addressed include:
  - labeling the line and pump/channel; line tracing
  - standardized infusion pumps
  - administration sets with yellow-striped tubing for epidurals
  - use of smart pumps; hard limits set in the drug library
  - administration of loading/bolus doses
  - data from smart pumps (reviewed, used for improvement)
  - ENFit/oral syringes; NRFit connectors

- Example item:
  - Item #140: Upper and lower hard limits for medication doses, concentrations, infusion rates, and loading doses and bolus doses have been set in the drug library for smart infusion pump technology used in perioperative settings, including in the operating room and/or procedure room.
Key Element VII: Environmental Factors, Workflow, & Staffing

2 Core Characteristics: 11 items (Cores #11-12)

Topics addressed include:
- lighting; adequate space
- functional/audible alarms
- staff scheduling; workload; fatigue
- nurse to patient ratio
- pharmacist involvement (onsite or conducts regular rounds)

Example item:
- Item #158: An adjusted case load, delay in procedures, or planned late arrival of a perioperative practitioner due to fatigue from working on call and/or overtime does not result in disciplinary sanction or other punitive action.

Key Element VIII: Staff Competency & Education

2 Core Characteristics: 11 items (Cores #13-14)

Topics addressed include:
- role-playing/simulations of error-prone conditions
- qualified practitioners to administer deep/moderate sedation
- training on drug effects to prevent dose stacking
- practitioners receive information about risks and strategies
- education about medication delivery devices before use
- hazardous drug education; new drug formulary education

Example item:
- Item #162: Role-playing and simulations of perioperative error-prone conditions and adverse events are used as methodologies to orient and educate perioperative staff about medication and patient safety.
Key Element IX: Patient Education

- **1 Core Characteristic:** 8 items (Core #15)

- **Topics addressed include:**
  - educate patients about medications that will give pre-/intra-/postop
  - activation of the PCA/PCEA button
  - provide patients with drug info. during each administration
  - discharge education
  - when to resume previous medications
  - responsible adult to observe/accompany patient post-discharge

- **Example item:**
  - **Item #174:** Patients, caregivers, and visitors are educated about the dangers of any individual other than the patient activating the PCA or PCEA button to deliver a medication dose (i.e., PCA by proxy); and a warning label, *"For Patient Use Only,"* appears on the cord or activation button for PCA or PCEA.

Key Element X: Quality Processes & Risk Management

- **4 Core Characteristics:** 42 items (Cores #16-19)

- **Topics addressed include:**
  - Just Culture; WalkRounds, safety huddles
  - error reporting, including close calls and hazards
  - use of external safety alerts/recommendations to address risks
  - review of data/reports to identify problems/risks
  - implementation of high-leverage strategies
  - use of checklists/time-out process; barcoding; double checks
  - infection control practices

- **Example item:**
  - **Item #220:** A bag or bottle of an IV solution or medication infusion (e.g., phenylephrine, insulin) is never prepared and/or used outside the pharmacy as a source of flushes, diluents, or bolus doses for single or multiple patients.
ISMP Perioperative Self-Assessment Webpage

Provides access to:

- Online self-assessment site/form (used for submitting responses to ISMP)
- Frequently Asked Questions (FAQs)
- Instructions
- Key Definitions and Glossary
- Full assessment PDF/Workbook (must be logged in to ISMP website)
- Excel spreadsheet of the demographic questions and assessment items (must be logged in to ISMP website)
Access Full PDF/Workbook and Excel Spreadsheet

- Need to be logged in to the main ISMP website to access
- If you do not already have an account to the main ISMP website, it is free to create one
- Scroll to the bottom of the perioperative self-assessment webpage to access the documents (once signed in)

Self-Assessment PDF/Workbook

- Includes:
  - Invitation to participate
  - Funding source, security of information
  - Purpose, audience, scope
  - Advisory group, endorsing organizations
  - Key definitions/abbreviations
  - Complete instructions
  - Demographic questions
  - Self-assessment items
  - Glossary
Excel Spreadsheet

- Includes:
  - Demographic questions
  - Self-assessment items
- Can be used to facilitate discussion and completion of the assessment and/or for distribution of the items to team members
- Allows for easier review and revision of responses before submission to ISMP
- Can be used to sort responses and document discussion of selected choices

Online Self-Assessment Site/Form

The online self-assessment form allows you to:
- Create a new user account
- Reset your password
- Save and return to your saved answers at any time during the submission period
- Enter and submit your demographic and self-assessment information to ISMP anonymously
- View and print your submitted demographics and self-assessment results
Instructions for Conducting the Assessment

Establish team
Establish a core interdisciplinary team and invite additional members as needed to complete certain items

Select leader
Choose a team leader to coordinate the assessment activities, along with a second individual to record responses

Distribute material
Provide team members with access to the directions, key definitions/abbreviations, glossary, demographic questions, items, and FAQs

Choose option
Choose an option for conducting the self assessment (i.e., PDF, Excel spreadsheet, or online form)
Core Interdisciplinary Team

— Establish a team consisting of, or similar to, the following:
  • Senior facility leader/administrator and/or chief nurse leader
  • One or two surgeons/physicians who perform medical and/or surgical procedures under sedation
  • One or two anesthesia providers
  • One or two frontline perioperative nurses

— If applicable, the core team might also include:
  • Anesthesia personnel
  • Other frontline perioperative staff
  • Director of pharmacy or director of pharmacy operations
  • Staff pharmacist
  • Clinical information technology specialist
  • Medication safety officer or patient safety officer/manager
  • Risk management and quality improvement professional

Instructions for Conducting the Assessment

Establish team

Establish a core interdisciplinary team and invite additional members as needed to complete certain items

Select leader

Choose a team leader to coordinate the assessment activities, along with a second individual to record responses

Distribute material

Provide team members with access to the directions, key definitions/abbreviations, glossary, demographic questions, items, and FAQs

Choose option

Choose an option for conducting the self assessment (i.e., PDF, Excel spreadsheet, or online form)
Instructions for Conducting the Assessment

- **Collect**: Gather and verify demographic information
- **Convene**: Convene the team to review the assessment process and review/answer the demographic questions
- **Complete**: Convene the team to discuss your facility’s level of implementation of each item; once consensus is reached, select and document the response
- **Submit**: Submit your information to ISMP by **August 31, 2021**
Create Account

User account

Create new account

Username

Password

Confirm password

E-mail address

Password strength:

Provide a password for the new account in both fields.

Create Account (continued)

If you are part of a collaborative, please provide your collaborative code below. (optional)

If you are part of a participating health system or collaborative that plans to analyze its aggregate data internally, please enter your assigned health system or collaborative-specific code when setting up your account. If you do not know your health system or collaborative-specific code, please contact your health system or collaborative leader before submitting your information. If you are a health system or collaborative leader who would like to obtain a code, please contact collabcodes@ismp.org. If you are not part of a health system or collaborative that will be aggregating its results, please leave this prompt blank.

If you are part of more than one collaborative, please provide your additional collaborative codes below. (optional)

If you are part of more than one collaborative, please provide your additional collaborative codes below. (optional)

Please select the one category that best describes the facility completing this assessment. (optional)

- Hospital that performs inpatient and/or outpatient medical and/or surgical procedures
- Freestanding ambulatory surgery center (ASC) not physically connected to a hospital, irrespective of ownership and licensure, including freestanding ASCs dedicated to specialty procedures (e.g., gastrointestinal/endoscopy procedures, interventional radiology, ophthalmic procedures, pain management procedures, fertility procedures)
- Other facility that performs outpatient medical and/or surgical procedures

If "Other facility," please specify:

Create new account
Instructions for Submitting Information to ISMP

Demographic Information
Complete and submit the general demographic information (must submit to gain access to assessment items); once you submit, you will no longer be able to make changes.

Self-Assessment Items
Complete and submit each Core Characteristic, one at a time; once you submit a Core Characteristic, you will no longer be able to make changes to that Core.

Generate and View Reports
Directed to a report containing your facility's score/% score and the maximum weighted score for the entire assessment and each Key and Core, as well as reports with your facility's answer choice, your facility's numerical score, and the maximum weighted score for each item.

Provided Facility Results*

- For the entire assessment and each Key and Core
  - Facility's weighted score
  - Maximum weighted score
  - Facility's % of the maximum weighted score

- For each item
  - Facility's answer choice
  - Facility's weighted score
  - Maximum weighted score

*each facility that submits the entire assessment during the submission period will also receive access to comparative aggregate results near the beginning of the 4th quarter of 2021.
**Core Characteristic**

You get 40 of the maximum weighted score of 120.
Year % score was 31.1%

**ITEM RESULTS**

1. A computer-generated identification bracket is verified for correctness using two unique patient identifiers and placed on the patient prior to medication administration and/or the medical and/or surgical procedure.

Your response:
- A. There has been no activity to implement this item.
- B. This item has been formally discussed and considered, but it has not been implemented.
- C. This item has been partially implemented for some patients, orders, drugs, or staff.
- D. This item is fully implemented for some patients, orders, drugs, or staff.
- E. This item is fully implemented for all patients, orders, drugs, or staff.

**Collaboration with ISMP**

- Contract (for a fee) with ISMP to establish a cohort of data for your collaborative group
- Work with ISMP to develop collaborative-specific codes and distribute to the facilities in your group
- Each facility will enter their assigned code in their account
  - Can be done during account creation or after submitting the entire assessment
- Following the submission deadline, ISMP will provide each collaborative group with an Excel spreadsheet of the aggregate data of their member facilities
- For more information, contact ISMP at: selfassess@ismp.org
How to Contact ISMP with Questions

— Email us at: selfassess@ismp.org

— Submit a question using the “Contact Us” link on the ISMP website at: www.ismp.org/contact (“Self-Assessments”)

— Submit a question using the “Need Help?” link in the online form/site (right)
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Slide Citations


